

WHAT IS CLAIMED IS:

1. A method of operating a control channel cellular radio transmitter for reporting a status of a fire alarm system comprising:

scanning available cellular control channels and measuring the signal strength of each cellular control channel;

selecting a cellular control channel with the strongest signal strength which is verified as being available for the assigned carrier to report a status of the fire alarm system;

selecting a cellular control channel with a second strongest signal strength which is also verified as being available for the assigned carrier to report a status of the fire alarm system;

transmitting a cellular radio message on the status of the fire alarm system over either of the cellular control channel with the strongest signal strength or the cellular control channel with the second strongest signal strength.

2. The method of claim 1, wherein following the steps of scanning and measuring, developing a channel list in which the cellular control channels are sorted and classified according to signal strength.

3. The method of claim 2, wherein the channel list is checked for availability of two or more channels with acceptable RSSI (Receive Signal Strength Indication), and if two or more channels with acceptable RSSI are not available, then report a loss of two site coverage, and if two or more channels with acceptable RSSI are available, operate on the strongest verified channel until a supervision delay or a loss of signal is experienced.

4. The method of claim 2, wherein after the step of selecting a cellular control channel with the strongest signal strength, the next strongest signal channel on the channel list is selected and verified as being available for the assigned carrier, and if not verified, the next strongest signal channel is selected and verified, and if not verified, repeat the selecting and verifying steps until the last available channel on the channel list has been selected.

5. The method of claim 4, wherein after selecting all available channels on the channel list, a second verified channel for the assigned channel is not found, then report a loss

of two site coverage of two separate verified channels with acceptable RSSI, and operate on the strongest verified channel.

6. The method of claim 4, wherein if a second verified channel for the assigned carrier is found, then operate on the first strongest verified channel and report two site coverage as operating until a supervision delay or a loss of signal is experienced.

7. A system for operating a control channel cellular radio transmitter for reporting a status of a fire alarm system comprising:

- means for scanning available cellular control channels and measuring the signal strength of each cellular control channel;

- means for selecting a cellular control channel with the strongest signal strength which is verified as being available for the assigned carrier to report a status of the fire alarm system;

- means for selecting a cellular control channel with a second strongest signal strength which is also verified as being available for the assigned carrier to report a status of the fire alarm system;

- means for transmitting a cellular radio message on the status of the fire alarm system over either of the cellular control channel with the strongest signal strength or the cellular control channel with the second strongest signal strength.

8. The system of claim 7, including means for developing a channel list in which the cellular control channels are sorted and classified according to signal strength.

9. The system of claim 8, including means for checking the channel list for availability of two or more channels with acceptable RSSI (Receive Signal Strength Indication), and if two or more channels with acceptable RSSI are not available, means for reporting a loss of two site coverage, and if two or more channels with acceptable RSSI are available, means for operating on the strongest verified channel until a supervision delay or a loss of signal is experienced.

10. The system of claim 9, including means for checking all available channels on the channel list for a second verified channel for the assigned channel.

11. The system of claims 10, wherein if a second verified channel for the assigned channel is not found, means for reporting a loss of two site coverage of two separate verified channels with acceptable RSSI, and means for operating on the strongest verified channel.

12. The system of claim 10, wherein if a second verified channel for the assigned carrier is found, means for operating on the first strongest verified channel and means for reporting two site coverage as operating until a supervision delay or a loss of signal is experienced